VARIABLE-BANDWIDTH MULTI-GRANULARITY OPTICAL
ADD/DROP NETWORK

Abstract

A variable bandwidth hierarchical OADM apparatus and method handles different data rates, based on a waveband OADM and one or more wavelength OADMs in parallel. The wavelength OADM combines multiple adjacent channels with fine granularity up to the bandwidth of the waveband OADM. The wavebands and wavelengths to be passed, dropped, and added by the hierarchical OADM apparatus are all electronically selectable, hence no hardware modification is needed when the data rate is changed. The use of a coarse granularity waveband OADM and variable-bandwidth wavelength OADM with fine granularity enables our hierarchical OADM apparatus and method to provide a variable-bandwidth multi-granularity add/drop capability.